

Further Comments on Deepwater Volutidae from off Southeast Africa, with Descriptions of Two New Species of *Volutocorbis*

BY

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(1 Plate)

THE SPECIMENS OF THE FAMILY Volutidae collected off the coasts of South Africa and Mozambique on Cruises 7 and 8 of the *Anton Bruun* during the International Indian Ocean Expeditions have been turned over to me for study. As several new species have turned up in this material, as well as some interesting extensions of distribution I have considered it worthwhile to publish a paper supplementary to my two previous papers in "The Veliger" (Rehder, 1969 and 1970).

Fusivoluta von Martens, 1902

Fusivoluta von Martens, 1902, p. 237; REHDER, 1969, p. 205; WEAVER & DUPONT, 1970, p. 181.

Fusivoluta barnardi Rehder, 1969

Fusivoluta barnardi Rehder, 1969, p. 207, pl. 40, fig. 9, pl. 43, figs. 40-43; WEAVER & DUPONT, 1970, p. 182, pl. 77, figs. A, B.

When I described this species I had specimens before me from off southern Zululand and northern Natal only, and so I was led to comment that the related *Fusivoluta clarkei* Rehder occupied a more northerly range than did *F. barnardi*. Now, however, I find in the collection before me three typical specimens of *F. barnardi* dredged in 875 to 890 fathoms 48 miles due east of Cabo das Correntes, south of Inhambane. This is over 400 miles north of the previously known range of *F. barnardi*, and the distribution of this species now overlaps that of *F. clarkei*.

These specimens are from considerably greater depth than that from which the earlier known specimens were dredged, and are also notably smaller. Whether this size

difference is correlated with the greater depth is a matter for speculation.

Specimens Examined: (USNM 717640 and 717650): about 48 miles ESE of Cabo Inhambane, Mozambique (Lat. 24°05'S; Long. 36°13'E); IIOE, *Anton Bruun* Cruise 7, Sta. 369F, Aug. 17, 1964; 890-875 fms. (Agassiz Trawl).

Measurements (in mm.)			
length	56.7	50.1	45.8
width	23.6	(lip broken)	18.2
aperture length ¹	30.7	25.4	22.7

¹ Measured to end of anterior canal

Fusivoluta clarkei Rehder, 1969

Fusivoluta clarkei Rehder, 1969, p. 206, pl. 40, fig. 8, pl. 43, figs. 37-39; WEAVER AND DUPONT, 1970, p. 183, pl. 77, figs. C, D.

Twelve specimens were dredged by the *Anton Bruun* on Cruise 8 at three stations (396B, 397C, and 398B). The first two stations are off Delagoa Bay in 246 to 358 fms. in the general area where the type series was collected. The eight specimens collected here are quite typical though averaging somewhat smaller than those on which the original description was based; the adults range in length from 62.5 mm to 76.4 mm.

The four specimens from Station 398B were dredged in 404 fathoms southeast of Ponta São Sebastião and about 23 miles off the coast; this is about 300 miles north of the type locality. These shells differ from those found farther south by the ribs on the second and third post

nuclear whorls becoming more numerous and more slender, and by the axial ribbing disappearing on the penultimate and antepenultimate whorls. In addition, the spiral sculpture is slightly sharper. Even though this northern population shows these differences in sculpture I hesitate to describe it as a distinct geographical race until more material is forthcoming from the intervening area.

Volutocorbis Dall, 1890

Volutocorbis Dall, 1890, p. 75; REHDER, 1969, p. 200; WEAVER & DUPONT, 1970, p. 9.

Volutocorbis gilchristi (Sowerby, 1902)

Figures 1, 2 and 6

Volutilithes gilchristi Sowerby, 1902, p. 99, pl. 2, fig. 5.
Volutocorbis gilchristi (Sowerby) Rehder, 1969, p. 204, pl. 40, fig. 1, pl. 42, figs. 23, 24; WEAVER & DUPONT, 1970, p. 12, pl. 3, figs. J, K.

Three specimens, two adults and one immature, of this relatively rare species were dredged about 30 miles off Durban, Natal in 240 fathoms; IIOE: *Anton Bruun* Cruise 7, Sta. 390 C. Both adult specimens are fresh and in perfect condition, and I am figuring both shell and nucleus (Figures 1, 6) of the largest one.

Measurements (in mm.)		
length	29.5	23.2
width	13.8	11.3

Volutocorbis boswellae Rehder, 1969

Volutocorbis boswellae Rehder, 1969, p. 202, pl. 40, fig. 5, pl. 44, figs. 16-19; WEAVER & DUPONT, 1970, p. 10, pl. 3, figs. E-G.

I must call attention to an error in Weaver and duPont's outstanding book on the living Volutidae. On plate 3, figure E, which is identified in the explanation as an example

of *Volutocorbis abyssicola* Adams and Reeve, actually represents *V. boswellae* Rehder. This is the same specimen from the Helen Boswell collection that is figured in my 1969 paper (plate 41, figs. 16 and 17).

The designation by Weaver and duPont of this shell as an example of *Volutocorbis boswellae* may account for the statement under *V. disparilis* REHDER, 1969 in their book (WEAVER & DUPONT, 1970, p. 11) that the latter species may "prove to be a form of *V. abyssicola*." Actually *disparilis* is much closer to *V. boswellae*.

Volutocorbis mozambicana Rehder spec. nov.

(Figures 3-5, 7-9)

Diagnosis: Shell small, adult shells from 14.1 to 19.9 mm ($\frac{1}{2}$ to $\frac{3}{4}$ inches) in length, upper part of whorls subplanulate at suture, whorls with strong ribs that are crossed by conspicuous grooves, deepest in upper part of whorls where the ribs are thereby made nodulose. Outer lip thin, not reflected, columella with numerous fine folds.

Distribution: from off Lourenço Marques to south of Inhambane, southern Mozambique in 480 to 880 fathoms.

Description: Shell small, adult shells 14.1 to 19.9 mm ($\frac{1}{2}$ to $\frac{3}{4}$ inches) in length, elongate ovate to subfusiform, straw yellow to grayish-yellow in color. Apical whorls eroded on all specimens. Post nuclear whorls strongly shouldered, flattened at strongly impressed suture and weakly convex below shoulder; sculptured by strong, angular ribs (17 on penultimate whorl) which are cut on spire whorls by a strong spiral groove below the shoulder and two successively weaker ones below; this results in two series of strong, subconical, somewhat axially elongate nodes. Body whorl with same sculpture on upper part, lower part with weak spiral grooves that make axial ribs weakly nodulose, the axial ribs gradually disappearing towards base. Aperture elongate ovate, with anterior end forming a broad sinus; outer lip angulate at posterior end, only slightly thickened; inner lip with six to eight folds, the lowest one the strongest; a thin gray-white callus is present on the parietal wall and columella.

Plate Explanation

Figures 1, 2: *Volutocorbis gilchristi* Sowerby. USNM No. 717971. 30 miles E of Durban, Natal, South Africa × 2
 Figure 3: *Volutocorbis mozambicana* Rehder, spec. nov. Holotype, USNM No. 717909. 95 miles SE of Inhaca Id., Mozambique × 2
 Figures 4, 5: *Volutocorbis mozambicana* Rehder, spec. nov. Paratypes, USNM No. 717647. 50 miles off Cabo das Correntes, Mozambique × 2

Figure 6: *Volutocorbis gilchristi* Sowerby. Protoconch and early postnuclear whorls. USNM No. 717971 × 2
 Figure 7: *Volutocorbis mozambicana* Rehder, spec. nov. Holotype, USNM No. 717909 × 2
 Figures 8, 9: *Volutocorbis mozambicana* Rehder, spec. nov. Paratypes, USNM No. 717647 × 2



Figure 1

Figure 2



Figure 3

Figure 4

Figure 5

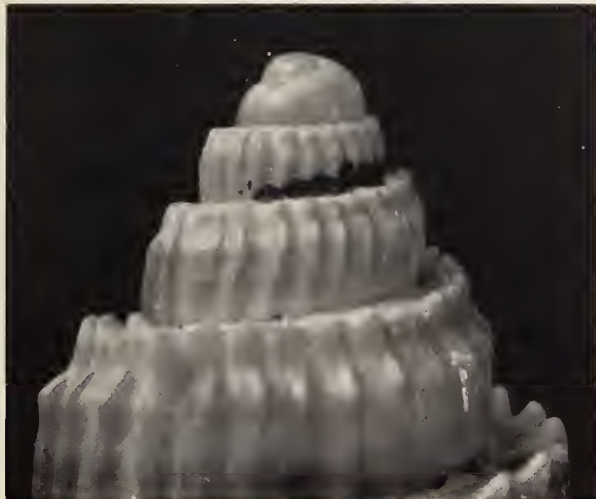


Figure 6



Figure 7

Figure 8

Figure 9

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